

CLAIMS

1. A process of dehumidification and of injection and moulding for granulated plastics materials, comprising a dehumidification step (1a) in which the granules are dehumidified by contact with air at a dehumidification temperature, and a subsequent injection and moulding step (1b) in which the granules coming from the dehumidification step are heated to a moulding temperature higher than the dehumidification temperature and are then injected into a mould, characterized in that, between the dehumidification step and the injection and moulding step, a heating step (20) is provided, in which the granules are heated, in a substantial absence of oxygen, to a supply temperature between the dehumidification temperature and the moulding temperature.

2. A method according to Claim 1 in which, in the heating step (20), the granules are heated by contact with a substantially oxygen-free inert gas.

3. A method according to Claim 2 in which the inert gas is technical nitrogen.

4. A method according to Claim 1 or Claim 2 in which the gas is oxygen-impoverished air obtained by means of a step of recirculation of the air in closed circuit at high temperature, in which the air is put in contact with the granules.

5. A method according to Claim 4 in which the air is derived from the air which is used in the step for the dehumidification of the granules.

6. A method according to one or more of the preceding claims in which the supply temperature is lower than the softening point of the

granules.

7. A method according to one or more of the preceding claims in which the plastics material is based on polyethylene terephthalate.

8. A method according to Claim 7 in which the supply temperature
5 is between 200°C and 250°C.

9. A method according to Claim 8 in which the supply temperature is between 220°C and 230°C.

10. A plant (1) for the dehumidification and the injection and moulding of granulated plastics materials, comprising a unit (1a) for
10 dehumidifying the granules by means of process air, in which the granules are heated to a dehumidification temperature, and a unit (1b) for injecting and moulding the granules coming from the dehumidification unit, in which the granules are brought to a moulding temperature higher than the dehumidification temperature,
15 characterized in that, between the dehumidification unit and the injection and moulding unit, granule-heating means (20) are provided for heating the granules in a substantial absence of oxygen, to a supply temperature between the dehumidification temperature and the moulding temperature.

20 11. A plant according to Claim 10 in which the granule-heating means (20) comprise a hopper (21) and a circuit (22) for the heating and admission of a hot inert gas into the hopper (21) in order to heat the granules contained therein to the supply temperature.

12. A plant according to Claim 11 in which a connection (31) is
25 provided between a circuit (4) of the process air used in the unit (1a) for

dehumidifying the granules and the circuit (22) for heating and admitting the gas to the hopper (21).

13. A plant according to Claim 11 or Claim 12 in which the hot inert gas is admitted to the hopper (21) as a counter-current relative to
5 the granules.